WHAT IS CLAIMED IS:

1. An oscillator circuit, comprising:

a resonator having a resonant frequency;

an active device, coupled to said resonator, said active device capable of oscillating at said resonant frequency of said resonator; and

an inductor circuit connected to said active device and in parallel with said resonator, whereby said inductor circuit shorts-out thermal noise associated with said active device.

2. The oscillator circuit of claim 1, wherein said inductor circuit is connected across output terminals of the active device.

3. The oscillator circuit of claim 2, wherein said inductor circuit provides a DC feedback path between said output terminals.

4. The oscillator circuit of claim 1, wherein said inductor circuit includes an inductor that is connected in series with a resistor.

5. The oscillator circuit of claim 4, wherein a value of said inductor is such that said inductor does not shift said resonant frequency of said resonator.

6. The oscillator circuit of claim 4, wherein a value of said inductor is such that a parallel combination of said inductor and said resonator has a resonant frequency that is substantially the same as that of said resonator.

7. The oscillator circuit of claim 4, wherein a value of said inductor is such that any parasitic resonance that is caused by said inductor is lower in frequency than said resonant frequency of said resonator by a factor of at least $\sqrt{0.1}$.

8. The oscillator circuit of claim 7, wherein said resistor quashes at least one parasitic oscillation that is associated with said inductor.

9. The oscillator circuit of claim 1, wherein said resonator is a crystal resonator.

10. The oscillator circuit of claim 9, further comprising an additional capacitor that is connected in parallel with said crystal resonator.

11. The oscillator circuit of claim 10, wherein said additional capacitor compensates for any frequency shift caused by said inductor circuit.

12. The oscillator circuit of claim 1, wherein said resonator is a series inductor- capacitor resonant circuit.

13. The oscillator circuit of claim 1, wherein said resonator is a parallel inductor-capacitor resonant circuit.

14. The oscillator circuit of claim 1, further comprising at least one bias resistor that is associated with said oscillator circuit.

15. The oscillator circuit of claim 14, wherein said inductor circuit shorts-out thermal noise generated by said bias resistor.

16. The oscillator circuit of claim 14, wherein said resistor in said inductor circuit is less than said bias resistor.

17. The oscillator circuit of claim 1, wherein said active device includes a cross-coupled pair of transistors.

18. The oscillator circuit of claim 17, wherein said cross-coupled pair of transistors are AC coupled.

19. The oscillator circuit of claim 17, further comprising:

an active bias circuit to bias said cross-coupled pair of transistors; and

at least one bias resistor that connects said bias circuit to said cross-coupled pair of transistor.

20. The oscillator circuit of claim 19, wherein said inductor circuit shorts-out thermal noise that is generated by said at least one bias resistor.

21. A method of generating a periodic signal having low phase noise, the method comprising the steps of:

(1) biasing an active device using at least one resistor;

(2) causing said active device to oscillate at a resonant frequency, thereby producing the periodic signal; and

(3) shorting-out thermal noise that is generated by said at least one resistor, thereby reducing the effect of said thermal noise on the phase noise of the periodic signal.

22. The method of claim 21, wherein said periodic signal is produced at output terminals of said active device, and wherein step (3) comprises the step of providing a DC feedback path across said output terminals of said active device.

23. The method of claim 22, further comprising the step of:

(4) suppressing at least one parasitic oscillation that is associated with said DC feedback path.

24. The method of claim 21, further comprising the step of:

(4) tuning a frequency of the periodic signal to compensate for any frequency shift caused by said DC feedback path.

25. The method of claim 24, wherein step (4) comprises the step of tuning a capacitance coupled to said active device.

26. The method of claim 21, wherein step (2) comprises the step of providing a positive feedback path for said active device.

27. An oscillator circuit, comprising:

a resonator having a resonant frequency;

an active device coupled to said resonator, said active device capable of oscillating at said resonant frequency;

at least one bias resistor to bias said active device; and

means for reducing the effect of thermal noise associated with said bias resistor on a phase noise floor of said oscillator circuit.

28. The oscillator circuit of claim 27, wherein said means for reducing comprises means for shorting-out thermal noise that is associated with said at least one bias resistor.

29. The oscillator circuit of claim 27, wherein said means for reducing comprises an inductor circuit coupled to said active device, said inductor circuit including an inductor and a resistor that are connected in-series.

30. The oscillator circuit of claim 27, wherein said inductor is large enough that a parasitic resonance caused by said inductor is lower in frequency than said resonant frequency of said resonator by at least a factor of $\sqrt{0.1}$.

31. The oscillator circuit of claim 30, wherein said resistor in said inductor circuit is large enough to prevent said active device from oscillating at said parasitic resonance.

32. The oscillator circuit of claim 31, wherein said resistor in said inductor circuit is not larger than said at least one bias resistor.

33. An oscillator circuit, comprising:

a crystal resonator having a resonant frequency;

an active device, coupled to said resonator, said active device capable of oscillating at said resonant frequency;

at least one bias resistor to bias said active device; and

an inductor circuit coupled across output terminals of said active device, said inductor circuit including an inductor and a resistor that are connected in series.

34. The oscillator circuit of claim 33, wherein said crystal resonator is connected to said output terminals of said active device, and in-parallel with said inductor circuit.

35. The oscillator circuit of claim 33, wherein said inductor circuit provides a DC feedback path between said oscillator output terminals so as to short-out thermal noise from said at least one bias resistor.

36. The oscillator circuit of claim 33, wherein said inductor in said inductor circuit is large enough that a parasitic resonance caused by said inductor is lower in frequency than said resonance of said resonator by at least a factor of $\sqrt{0.1}$.

37. The oscillator circuit of claim 36, wherein said resistor in said inductor circuit is large enough to prevent said active device from oscillating at said parasitic resonance.

38. The oscillator circuit of claim 37, wherein said resistor value is smaller than a value of said at least one bias resistor.

39. The oscillator circuit of claim 33, wherein said active device includes a pair of cross-coupled transistors that are AC coupled.

40. The oscillator circuit of claim 39, wherein said crystal resonator causes a positive feedback path for said cross-coupled transistors at said resonant frequency, thereby causing said cross-coupled transistors to oscillate.